

AMENDMENTS TO THE CLAIMS

What is claimed is:

1. (Currently Amended) In a local area network ("LAN") system comprising at least one client, a method performed by a client to receive a MAC address for said network comprises:

selecting by said client, a MAC address available for said network;

monitoring by said client, broadcasts over said network for each MAC address advertisement frame transmitted over said network responsive to selecting said MAC address;

determining whether each said advertisement frame monitored by said client is an advertisement frame for said selected MAC address;

broadcasting a MAC address request frame by said client wherein said MAC address request is requesting said selected MAC address, responsive to a determination that each said MAC advertisement frame monitored is not an advertisement frame for said selected MAC address;

determining whether a MAC address response frame was received by said client responsive to broadcasting said MAC address advertisement frame; and

broadcasting a MAC address advertisement frame from said client wherein said MAC address advertisement frame is for said selected address indicating said client is using said selected address if no MAC address response frame was received.

2. (Currently Amended) The method of Claim 1, wherein said method further comprises:

receiving a MAC advertisement frame by said client;

determining whether said MAC address advertisement frame for said selected address was received by said client;

sending a duplicate MAC address frame from said client, responsive to a determination that said MAC address advertisement frame ~~of~~ is for said selected MAC address; and

returning to the act of broadcasting MAC address advertisement frames for said selected address from said client.

3. (Currently Amended) The method of Claim 2, wherein said method further comprises:

receiving a MAC address response frame from a server by said client;

determining whether said server confirms the availability of said selected MAC address for said client responsive to said MAC address response frame being received;

employing said MAC address for said client; and

proceeding to said act of broadcasting said MAC address advertisement frame for said selected address from said client.

4. (Currently Amended) The method of Claim 2, wherein said method further comprises rejecting said selected MAC address by said client if a duplicate MAC address frame was received.

5. (Currently Amended) The method of Claim 2, wherein said method further comprises indicating a warning message by said client if no server confirms the availability of said selected MAC address.

6. (Currently Amended) The method of Claim 2, wherein said method further comprises indicating a warning message by said client if a duplicate MAC address frame is received.

7. (Currently Amended) The method of Claim 2, wherein said method further comprises:

returning to the act of selecting a MAC address by said client if no server confirms the availability of the selected MAC address.

8. (Currently Amended) The method of Claim 2, wherein said method further comprises:

returning to the act of selecting a MAC address by said client if a duplicate MAC address frame was received for the selected MAC address.

9. (Currently Amended) In a local area network ("LAN") system comprising a client and a server, a method performed by said server for assigning a MAC address to said client comprising:

receiving a MAC address request frame by said server from said client
requesting a selected MAC address;
determining said server whether said selected MAC address is available;
and

sending an MAC address response from said server to said client
indicating that the selected MAC address requested is available if the said selected MAC address is available.

10. (Currently Amended) The method of Claim 9, wherein said method further comprises:

developing an in-use MAC address database maintained by said server;
receiving a MAC address advertisement frame by said server from said client for said selected MAC address; comparing said selected MAC address from said MAC address advertisement frame to addresses in said in-use MAC database of said server to determine whether said selected MAC address is in use by another client and sending an MAC address response indicating that the MAC address requested is available responsive to a determination that said selected MAC address is available.

11. (Currently Amended) The method of claim 10, wherein said method further comprises sending an MAC address response indicating that said selected MAC address is not available responsive to a determination, by said server, that said selected MAC address is in-use by another client.

12. (Currently Amended) A network device comprising a client, wherein said client comprises a processor and a memory; wherein said memory contains a program which when executed causes the processor to perform the acts comprising:

selecting, by said client, a MAC address available for said network;

monitoring, by said client, broadcasts over said network for each MAC address advertisement frame transmitted over said network responsive to selecting said MAC address;

determining whether each said advertisement frame monitored by said client is an advertisement frame for said selected MAC address;

broadcasting a MAC address request frame from said client requesting said selected MAC address responsive to a determination that each said MAC advertisement frame monitored is not an advertisement frame for said selected MAC address;

determining whether a MAC address response frame was received by said client responsive to broadcasting said MAC address advertisement frame; and

broadcasting a MAC address advertisement frame from said client for said selected address indicating said client is using said selected address if no MAC address response frame was received.

13. (Currently Amended) The network device of Claim 12, wherein said program further comprises the acts of:

receiving a MAC advertisement frame by said client;

determining whether said MAC address advertisement frame for said selected address was received by said client;

sending a duplicate MAC address frame from said client, responsive to a determination that said MAC address advertisement frame ~~of~~ is for said selected MAC address; and

returning to the act of broadcasting MAC address advertisement frames for said selected address from said client.

14. (Currently Amended) The network device of Claim 13, wherein said program further comprises the acts of:

receiving a MAC address response frame from a server in said client;

determining whether said server confirms the availability of said selected MAC address of said client responsive to said MAC address response frame being received;

employing said MAC address by said client; and

proceeding to said act of broadcasting said MAC address advertisement frame for said selected address from said client.

15. (Currently Amended) The network device of Claim 13, wherein said program further comprises the act of rejecting said selected MAC address by said client if a duplicate MAC address frame was received.

16. (Currently Amended) The network device of Claim 13, wherein said program further comprises the act of indicating a warning message by said client if no server confirms the availability of said selected MAC address.

17. (Currently Amended) The network device of Claim 13, wherein said program further comprises the act of indicating a warning message in said client if a duplicate MAC address frame is received.

18. (Currently Amended) The network device of Claim 13, wherein said program further comprises the act of returning to the act of selecting a MAC address by said server if no server confirms the availability of the selected MAC address.

19. (Currently Amended) The network device of Claim 13, wherein said program further comprises the act of returning to the act of selecting a MAC address by said client if a duplicate MAC address frame was received for the selected MAC address.

20. (Currently Amended) A network device comprising a client and a server, wherein said server comprises a processor and a memory; wherein said memory contains a program which when executed causes the processor to perform the acts comprising:

receiving a MAC address request frame from said client in said server requesting a selected MAC address;

determining whether said selected MAC address is available from said server; and

sending an MAC address response from said server indicating that the selected MAC address requested is available if the said selected MAC address is available.

21. (Currently Amended) The network device of Claim 20, wherein said program further comprises the acts of:

developing an in-use MAC address database in said server; receiving a MAC address advertisement frame from said client in said server for said selected MAC address; comparing said selected MAC address of said client from said MAC address advertisement frame to addresses in said in-use MAC database to determine whether said selected MAC address is in use by another client and sending an MAC address response indicating that the MAC address requested is available responsive to a determination that said selected MAC address is available.

22. (Currently Amended) The network device of Claim 21, wherein said program further comprises the act of sending a MAC address response from said server to said client indicating that said requested MAC address is not available.

23. (Currently Amended) A network device comprising at least one client, wherein each of said at least one client comprises:

means in said client for selecting a MAC address available for said network;

means in said client for monitoring broadcasts over said network for each MAC address advertisement frame transmitted over said network responsive to selecting said MAC address;

means in said client for determining whether & each said advertisement frame monitored is an advertisement frame for said selected MAC address;

means in said client for broadcasting a MAC address request frame requesting said selected MAC address responsive to a determination that each said MAC advertisement frame monitored is not an advertisement frame for said selected MAC address;

means in said client for determining whether a MAC address response frame was received responsive to broadcasting said MAC address advertisement frame; and

means in said client for broadcasting a MAC address advertisement frame for said selected address indicating said client is using said selected address if no MAC address response frame was received.

24. (Currently Amended) The network device of Claim 23, wherein each of said at least one client further comprises:

means in said client for receiving a MAC advertisement frame;

means in said client for determining whether said MAC address advertisement frame for said selected address was received;

means in said client for sending a duplicate MAC address frame, responsive to a determination that said MAC address advertisement frame is for said selected MAC address; and

means in said client for returning to the act of broadcasting MAC address advertisement frames for said selected address

25. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises:

means in said client for receiving a MAC address response frame from a server

means in said client for determining whether said server confirms the availability of said selected MAC address responsive to said MAC address response frame being received; and

means in said client for proceeding to said act of broadcasting said ~~selected~~ MAC address advertisement frame for said selected address.

26. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises means in said client for rejecting said selected MAC address if a duplicate MAC address frame was received.

27. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises means in said client for indicating a warning message if no server confirms the availability of said selected MAC address.

28. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises means in said client for indicating a warning message if a duplicate MAC address frame is received.

29. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises means in said client for returning to the act of selecting a MAC address if no server confirms the availability of the selected MAC address.

30. (Currently Amended) The network device of Claim 24, wherein each of said at least one client further comprises a means in said client for returning to the act of selecting a MAC address if a duplicate MAC address frame was received for the selected MAC address.

31. (Currently Amended) A network device comprising at least one client and one server, wherein each of said at least one server comprises:

means in said server for receiving a MAC address request frame from said client requesting a selected MAC address;

means in said server for determining whether said selected MAC address is available; and

means in said server for sending an MAC address response indicating that the selected MAC address requested is available if the said selected MAC address is available.

32. (Currently Amended) The network device of Claim 31, wherein each of said at least one server further comprises:

means in said server for developing an in-use MAC address database;

means in said server for receiving a MAC address advertisement frame from said client for said selected MAC address; comparing said selected MAC address from said MAC address advertisement frame to addresses in said in-use MAC database to determine whether said selected MAC address is in use by another client; and

means in said server for sending an MAC address response indicating that the MAC address requested is available responsive to a determination that said selected MAC address is available

33. (Currently Amended) The network device of Claim 31, wherein each of said at least one server further comprises means in said server for sending an MAC address response indicating that said requested MAC address is not available.

34. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for receiving a MAC address, for said network, said method comprising:

selecting a MAC address available in said client for said network;

monitoring broadcasts over said network by said client for each MAC address advertisement frame transmitted over said network responsive to selecting said MAC address;

determining whether each said advertisement frame monitored by said client is an advertisement frame for said selected MAC address;

broadcasting a MAC address request frame from said client requesting said selected MAC address, responsive to a determination that each said MAC advertisement frame monitored is not an advertisement frame for said selected MAC address;

determining whether a MAC address response frame was received by said client responsive to broadcasting said MAC address advertisement frame; and

broadcasting a MAC address advertisement frame from said client for said selected address indicating said client is using said selected address if no MAC address response frame was received.

35. (Currently Amended) The method of Claim 34, wherein said method further comprises:

receiving a MAC advertisement frame in said client

determining whether said MAC address advertisement frame for said selected address was received by said client;

sending a duplicate MAC address frame from said client, responsive to a determination that said MAC address advertisement frame ~~of~~ is for said selected MAC address; and

returning to the act of broadcasting MAC address advertisement frames for said selected address.

36. (Currently Amended) The method of Claim 35, wherein said client-side method further comprises:

receiving a MAC address response frame from a server in said client;

determining whether said server confirms the availability of said selected MAC address responsive to said MAC address response frame being received by said client;

employing said MAC address for said client; and

proceeding to said act of broadcasting said MAC address advertisement frame for said selected address from said client.

37. (Currently Amended) The method of Claim 35, wherein said method further comprises rejecting said selected MAC address by said client if a duplicate MAC address frame was received.

38. (Currently Amended) The method of Claim 35, wherein said method further comprises indicating a warning message from said client if no server confirms the availability of said selected MAC address.

39. (Currently Amended) The method of Claim 35, wherein said method further comprises indicating a warning message from said client if a duplicate MAC address frame is received.

40. (Currently Amended) The method of Claim 35, wherein said method further comprises:

returning to the act of selecting a MAC address by said client if no server confirms the availability of the selected MAC address.

41. (Currently Amended) The method of Claim 35, wherein said method further comprises:

returning to the act of selecting a MAC address by said client if a duplicate MAC address frame was received for the selected MAC address.

42. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method performed by a server for assigning a MAC address to at a client connected to said server over a network said method comprising:

receiving a MAC address request frame from said client requesting a selected MAC address in said server;

determining whether said selected MAC address is available from said server; and

sending an MAC address response to said client from said server indicating that the selected MAC address requested is available if the said selected MAC address is available.

43. (Currently Amended) The method of Claim 42, wherein said method further comprises:

developing an in-use MAC address database in said server;

receiving a MAC address advertisement frame from said client for said selected MAC address in said server; comparing said selected MAC address from said

MAC address advertisement frame to addresses in said in-use MAC database of said server to determine whether said selected MAC address is in use by another client; and
sending an MAC address response from said server to said client indicating that the MAC address requested is available responsive to a determination that said selected MAC address is available.

44. (Currently Amended) The method of claim 42, wherein said method further comprises sending an MAC address response from said server to said client indicating that said selected MAC address is not available responsive to a determination that said selected MAC address is in-use by another client.